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FIELD DIARY

Mr. *Vernon Bailey*

*Biological Survey*  
(Official title.)

Period, *Jan 4, 1924, Feb. 14, 1924,*

*Louisiana Trips.*  
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Jan. 4, 1926.

Left Washington D.C.  
at 10:35 P.M. on Southern  
Ry. for New Orleans to  
study muskrat conditions  
during winter.

A warm day in Washington  
but rained most of night and  
next day down through  
North and South Carolina.

Jan. 5. A rainy day  
down through the Carolinas  
but warm and foggy.  
Walter Fisher and his wife  
on train and I read the  
trial of ~~death~~ of Serrano  
and slept. Had a very  
pleasant day.

1924.  
Jan. 6 Arrived at  
New Orleans 7:20 AM  
and finding Stanley Arthur  
had gone over to Orange,  
Texas Took his trail  
on the 11:05 AM train  
and arrived at Orange  
at 7:20 PM. Orange, Tex.  
Went to the Holland  
Hotel and slept well after  
getting out my old wash  
clothes.

A pleasant day,  
with warm sunshine  
across southern Tex.  
Leaves all off the deciduous  
trees and only the live oaks  
and *Magdalenia grandiflora*  
and cypresses showing green.  
The cypresses especially  
bare and bald except for their

loads of gray Spanish  
woss! The temperature  
has recently been down to  
18 above zero with hard ice  
on the ponds so the climate  
has been not so different  
from that at Washington.  
In one yard at Crowley or  
Lake Charles a lot of grasses  
were blooming, grass & winter  
grains are generally green  
but there is little gardening or  
farming activity. A few lettuce  
beds looked promising.

Jan. 7 At Orange I saw  
Mr. Ludy and his bookkeeper  
who sent me down to  
camp in a speed boat &  
while Arthur & Soika were

The Orange Canyon Land Co. Tracts  
of 163125 acres - practically  
all waste land - 30 by 14 mi.  
from the Sabine to 7 mi. East of  
Calcasieu R. - Includes the  
Jager tract of 25592 acres  
along the Gulf east of Johnson  
Bayou - to Mud Lake & Calcasieu  
Lakes. 8 x 4 mi.

North of this is an area of 137,539  
acres purchased by Stark from the  
Texas Oil Co.

Three years ago the  
Rosenthal & Breida Co. secured a  
ten year lease of the trapping rights in this land  
from the Texas Co. but with  
clauses that if this lease interfered  
with the sale of the land it was  
to be set aside.

The courts upheld this lease  
but the Texas oil co will pay

to settle as they guaranteed  
clear title of the tract.

In 1924-25 the caught  
193200 rats on the  
Jager and Texas tracts.  
Also 2993 musk.  
Raccoon 1742 -  
Otter 82.  
Opossum 147  
Skunk 15.

As many rats were probably  
caught by the other co.  
who also trapped under the  
old lease, making about  
350000 rats taken on this  
area by both companies.

The Orange Canyon  
Co. has during 1925 cut  
about 21 miles of large canals  
4 feet deep by 18 wide, to irrigate.

in fresh water from the  
seaside and access to all  
the trapping ground.

These canals are fed from the  
Sabine River near Orange and do  
not connect with the gulf or any  
salt water sources so the washes  
can be permanently supplied with  
fresh water.

At Bowlers Camp 8 miles  
north of Camp No. 2 on the Gulf  
Coast (Seelyville) where  
canals run east and west  
and south we staid two nights  
and trapped for muskrats.

The regular trapping had been  
stopped to save all the rats for  
next years crop and Homer  
Bowen and his son Bobby Bowen  
and themselves and families are  
keeping hunters instead of trapping  
rats as they planned to do.

They are well fixed with a  
house boat and other boats while  
the company has a big house  
boat that we used with double  
deck living room, kitchen,  
bath room, dined electric lights  
and all modern conveniences.

Muskrats are fairly numerous around the camp and now with a foot of water over the marsh they are leading a comfortable and normal life. They did not increase much last summer because of the dry weather and abnormal conditions but now are mostly full grown, large, fat and well fed.

They are feeding on the tender bases and roots and bulbs of several species of Scirpus, mainly americanus, rodgersii and olneyi, Cat-tails, Salt rush (big saw-bladed sedge) "wire grass" (one of the pale plumes) Bull rushes (Scirpus lacustris), and a floating green tender succulent weed that looks like Ceratophyllum but is more nearly like a Suaeda in texture - Bacopa monnina, water hyacinth.

The cage trap proved too weak in the openings & hold the rats but there was no trouble in catching them in it, set on feed beds where they run over the trigger at night.

A few specimens were collected but not many. About 170 skins confiscated from illegal trappers showed only a few immatures & no kits. The breeding season is well past but should begin again with warm weather.

One of the muskrats cooked was excellent meat, tender & rich and well flavored, better in fact than the several species of ducks we had with it.



Jan. 9 In P.M. went  
South 8 miles to end of  
canal at Camp No. 2,  
on the gulf and set out  
a lot of small traps and  
put out poisoned wheat for  
mice along the sandy beach.

Saw millions of geese and  
ducks. The geese are mainly  
snow geese, with some blue  
geese, "sprinkled bellies", honkers,  
and hutchinsons.

7 species of geese and 27  
species of ducks were counted  
up as more or less common  
here. This is considered the  
greatest goose and duck  
country of the state.

We examined the stomachs  
of the blue and snow geese killed  
and found them full of the tubers

from the roots of Scirpus  
americanus, the hard woody  
tubers chewed into small pieces  
by the powerful jaws and then  
ground to powder by the enormous  
muscular gizzard with its two  
opposite pads of cartilage, acting  
as millstones.

Cooked they were delicious  
fat and tender and well flavored.  
The gizzards were especially  
delicious but some are kept out  
the livers so we did not get any.

Louisiana: Cameron Co. Marshes.

Brown Pelican, 2 on beach, Jan. 4 & 11, 26.

Herring gulls, a few. Ring-billed, a few.  
Ducks, 27 species at all seasons.

Pintails, commonest  
Shovellers, next in numbers  
Blue-winged teal, common  
Green-winged teal, common  
Mallards " "  
Blacks ducks? a few -  
Gadwall " "  
Scaups, lesser " "  
Ruddy " "

Snow geese <sup>intermediata</sup>, in millions near the shore,  
Blue geese, abundant,  
Canada geese, common.  
Hutchinson geese, said to be common.

Great Blue heron, common.  
Bittern " "

Coots, thousands in marshes.  
Rails, King & Clapper  
Sanderlings - common  
Black-bellied plover " "  
Yellow legs " "  
Willits " "  
Blue-winged Stilt one collected by Hopkinson  
Baldpate, nest & old bird sitting,  
Marsh hawk obs.  
Red tail a few  
Owl hawk 1  
Sparrow hawk abundant;  
~~Shrike~~ +  
Turkey buzzard. common.  
Black vulture " "

Shrike 1  
Boat-tail grackle common.  
Redwings " "



many droppings were made up of  
mostly shells of blade builders.

Coon tracks and signs are  
common all along the canals  
and the beaches.

Marsh rabbit pellets are common  
and big and the rabbits are said  
to be very large and rather gray,  
probably Sylvilagus americanus.

We caught 3 rice rats in  
the grass and under logs along  
the beach ridge and Sivola  
got a live one from a burrow  
in the sand where it had a  
nest.

Sivola got the Sigmodon  
alive in the nest in a burrow  
on the beach ridge.

House mice are abundant  
and were the only mice caught.

Rats are common and very

Returned to Bowen<sup>m</sup> Camp  
in afternoon but did not set  
out any more traps.

A clear chilly day but not  
very cold.

Jan. 11. Returned to  
Orange on the big slow boat,  
leaving camp at 8 AM and  
arriving at 2 PM. but it  
was a very interesting trip  
up the canals to the ~~Interstate~~  
Canal and then into the Sabine  
River to Orange, and Bladen Bayou  
about 30 miles through solid  
marsh country and good woodlot  
pastures all the way.

Along the Bayou Bladen are  
some old groves of water lilies  
cypress. The bayou is very  
winding and picturesque

with lots of nests in the  
cypresses. Of two bald eagle  
nests one was occupied and  
the old bird said to be sitting  
on eggs while we saw only  
one with white head sitting on  
a branch near the nest.

In an old hawk's nest we  
found a great horned owl  
sitting on one egg.

In summer there are both black-  
crowned and yellow crowned herons  
nesting here, some Louisiana  
herons, little blue, snowy, egrets  
and roseate spoonbills. This is  
the colony I was going to visit  
the day I started for Bonclat  
July with an infected finger.

A still clear & very pleasant  
day, a little frost in the morning  
but warmed off pleasantly later.

Otter, one seen a few days ago  
in Bayou Black

Jan. 12.

Left Orange 11 AM for  
East Cove on Calcasieu Lake  
arriving at 1 PM., about  
50 miles south of Lake Charles.  
Came through the interoastal canal  
to Calcasieu Lake and then down  
the lake on the east side  
to near the coast.

Mexican Cormorants com. in Lake  
Short eared owl in marsh, pellets.



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Muskrat foods  
Cameron Parish, La. Jan 7-14.

Scirpus americanus - 3 <sup>woods</sup> ~~cornucop~~,  
Evergreen, much eaten.

Scirpus olneyi 9 heads  
Evergreen, much eaten

Scirpus robustus - leafy stems  
Evergreen stems, much eaten, also leaves  
Eleocharis quadrangulatus 4 <sup>spike much</sup> ~~squares~~ small bulblets  
Sweet to be eaten by muskrats & ducks.

Scirpus validus - Great bulrush  
Evergreen, much eaten.

Cladium effusum - Saw grass.  
Evergreen, much eaten, very abundant.

Typha angustifolia - Cattail  
Evergreen in places, much eaten.

Spartina patens pumila - Wire Grass  
Evergreen & much eaten

Spartina glabra - Quill cane, hog cane  
Not evergreen, not much eaten now.

Juncus roemerianus, Wildcat grass.  
Paille Chat tigre  
evergreen, not much eaten now.

Bacopa monniera (water hyssop)  
(water purslane)  
evergreen, floating, much eaten by  
both muskrats and ducks  
Alligator grass & natives.

Sagittaria lamifolia? big, spatulate leaf  
not common, evergreen, overplanted & eaten.

Sagittaria arrow leaf.  
A few, eaten by muskrats.


8 1924+5  
14 200 = 15 000 rats  
70 to 804 rats

5 men trapping Nov. 20, Feb. 5,  
on 480 acres, Lima River Ponds  
was Avoca Island.

In April Arthur found  
a fair stand of rats still there.  
This was approximately 30 rats  
to an acre.

In 1926, there are so few  
rats they stopped trapping -

Jan. 13. To Tappes Camp off  
Bayou.

Thirteen rats examined, one half grown  
kit. 8 ♀♀, 5 males, adults mostly  
w. One large ♀ had two small embryos  
, no others pregnant.

In fine *Scirpus americanus*.  
Always & robustly fed. Stomachs full,  
fat or in good condition.

15 houses examined, 13 traps,  
2 on boudes.

23 houses counted from an open  
on S. side of Bayou in clear stand of  
3 square.

One large house photographed, 4 feet  
high above water and 7 feet wide at base,  
made of grass and sedges. A good trail  
to top of house.

Back at camp they brought  
in 8 rats, 5 females and 3 males,  
all but one adults but no sign  
of embryos. I saved two of  
the old males, one weighed 3 lbs.  
and measured 572, 234, 80, 20.

The other weighed  $3\frac{1}{4}$  lbs.  
and ~~weighed~~ measured 585,  
238, 80, 18.

They are very dark with  
no yellow and long guard hairs  
as all the fully matured males  
have. I can see no difference  
between these and the big, dark,  
valuable Texas rats and suspect  
these were old males that had  
migrated west.

We had muskrats for supper,  
3 females, carefully skinned and  
dressed and rolled in corn meal  
with a little salt & pepper in it  
and fried in hot lard. All who

Ate them said they were better  
than squirrel or rabbit and tho  
I had a big praying pan full we  
ate it all and wanted more.

Next the liver is especially  
good and very large, but the  
kidneys are not very good  
and the hearts are thin walled,  
and soft, the lungs were full  
of blood.

Next time I shall fry them  
in only a little grease and in  
a covered pan.

Next morning a good mass of  
cat fish were delicious, but smelled  
whilst cooking of muskrat.

Said to be not fit to eat when feeding  
on muskrat carcasses thrown in  
bayou. An kept in fish box  
a week or two without food to get  
rid of musk.

Jan. 15

Left Orange, Tex., at 10:38  
am. and reached Morgan City,  
La., about 3 PM.

A very warm day and the  
green coming up again in  
fields. A few roses in blossom  
in door yards, spinaches  
and lettuce and cabbage and  
beets growing in vegetable  
and market gardens.

Lots of evergreen trees, live  
oak, magnolia, camphor,  
japan plum, shamel,  
box, two species of Myrica,  
two of Raccetaria, switch cane,  
three or four species of palms,  
yuccas, pines, and many  
sedges and grasses give a  
subtropical greenness to the  
vegetation, but the greater  
part of the forest and swamps

are bare and brown.

The very fragrant Japan plum is in blossom now and ripens in March. The young Savanna trees are mostly killed by the recent freeze,  $22^{\circ}$  above zero about 2 weeks ago.

There are practically no mosquitoes even out in the marshes.

Alligators are mostly in their holes for the winter but occasionally one comes out on a warm day. Sam Monte saw a 4 foot one a few days ago in the marsh and now we reported a water moccasin seen about a week ago.

There are rows of marsh rabbits hung up in market, some very large and heavy.



Jan. 16. Down to Muskrat Camp  
in P.M. after getting framework  
of a new muskrat trap done.  
Found the Evidhas comfortably  
located with 7 muskrats, 10 <sup>possibly</sup>  
one coon, 3 *Equidans* and 1 *Oryzomys*  
for a family, not counting a lot of  
young alligators and some chickens.

Set a few traps and some had a  
finishing *Nectoma* in a cage.  
One of the boys had recently brought  
in two *Oryzomys* *Rhithrodontomys*  
~~americanus~~ but both died.

Oh, yes. They have a swamp rabbit  
in a pen out doors.

Worked on trap but have  
to wait for wire for springs.

*Sigmodon hispidus* Tal, Jan. 19, 1926  
No. 48. Ewhlas,  
285; 105; 34; ear 26, wt. 202 grams.

Jan. 17, Got spring wire  
from home but too late in the  
day to make springs.

Jan. 18, made trap springs  
and finished trap - set traps for  
cottontails etc -

Jan. 19, Set trap for Muskrat  
and left Johnnie Lacost to  
take care of it as it is in  
his trap line.

Got some *Sigmodon*, *Microtus*,  
*Peromyscus* + house mice in small  
traps and explored an old pig  
pen out in a dead field.  
Found some big pellets of a barred  
Owl in it and one of a screech  
owl. The screech owl was there  
but the barred owl was gone.

Also two *Neotoma* nests and a  
*Neotoma* in one of them.

The barred Owl pellets were mostly

Sigurdson fur and bones but  
contained also mice bones.

Other owl pellets collected  
by the Swihlas down at the  
lookout tower on the Bayou Chene  
were partly muskrat and partly  
sigurdson and mice bones & fur.  
All sent in.

Jan. 20, Fixed up my old  
muskrat trap

Jan. 21, Set the other trap so  
I now have out two.

The weather has been very warm  
and violets blossoming in the  
yard but it is poor weather  
for muskrat trapping. Johnny  
La Costa got only 2 today in  
150 traps.

June 22, Wind blowing from south to west & north and the temperature dropped to near freezing before dark. This will make the muskrats hustle around and we may get one tomorrow. So windy today the trappers did not go to their traps.

Made a good muskrat pen.

Went on long tramps in the woods back along the old bayou where palmettos and cypresses are abundant. Saw lots of deer tracks and signs and some porcupine and coon tracks and woodrat nests. Photographed one Sabal palmetto but the sun would not shine enough for pictures.

Muskrat Camp, Morgan City, Jan. 16-26.

Birds

Herring Gulls, a few at Morgan City,  
Forsters tern, common along bayous.  
Killdeer common.  
Jacksnipe "

Bobwhite a few.  
Mourning doves abundant  
Turkey buzzards "  
Black Vulture "  
Barred Owl 1 at Silo  
Screech Owl 1 " "  
Red tail hawk, com  
Marsh hawk "  
Sparrow hawk "  
Fish hawk 1 seen Jan 23,  
  
Kingfisher common  
Phoebe "

Jan. 23 Cold and windy and  
cloudy, seen much in morning.  
Nothing in traps & Culicoides  
got only one cat.

Went to town in afternoon  
and got mail. Svichla got his  
Ford fixed up with starter and  
lights so it is in good shape.  
No sunshine all day for  
photographs.

Mrs. Svichla caught 2 live  
Neotomas in traps and four  
live harvest mice in buckets  
and two live Sigmodon.

Thicker common  
 Shrike "  
 Crow Common  
 Boat-tail Grackle "

Redwings blblids. Abn.

Meadowlark common.

Cardinal "

Song Sparrow "

Swamp " ? a few.

Ammodramus "

Carolina wren A few.

Marsh wren "

Cedar bird com.

Myrtle Warbler com.

Golden Crown King 2

Mocking bird a few

Robins common.

Pipits com.

White bellied Swallows "

Jan. 24, Rained all night & all day but not so cold as yesterday.

Made Cages of sawed wood to keep warm.

Jan 25 - Warm day in night and cleared by noon.

Reset traps.

Caught mice & rats in our traps out in pasture.

Found Sigmodon, Onychomys, Reithrodontomys aurantius, Sig Peromyscus, and Uta muscularis

under big thistles in the pasture and caught all of them <sup>in four pounds.</sup> alive.

Mrs. Swihla also caught one more Neotoma in a live trap, making 5 alive in the house now.

One large fat old male Sigmodon weighed 6 oz.

Muskrat Camp below Morgan City,  
Mammals. Jan. 16-25

Dus	Com -
Neotoma	"
Peromyscus	"
Sigmodon	"
Oryzomys	"
Reithrodontomys	"
Rattus norvegicus	"
Mus musculus	"
Fiber z. rivicivius	"
Sylvilagus aquaticus	"
Passum	"
Raccoon	"
Mink	a few
Other	rare.

Jan. 24. A frosty morning  
but clear and pleasant day.  
Went down to traps but no rats  
had been near the live traps.

Started for New Orleans  
with Ford Car and got stuck  
in mud several times en-way  
to Morgan City. There but  
good roads rest of way.

Left Morgan City 1:25 PM

I reached New Orleans 6:25.

Wonderful mass of woods  
and swamps, especially extensive  
— cypresses without beavers.

Saw many orange trees full  
of golden fruit. People  
making gardens all along way.

Jan. 27 Got spring steel  
wire at Van Hornes and other  
material for five traps to catch  
Muskrats. Went to the Consignment  
wharf and worked in their shop  
with Neal Senae and made up  
part of four traps.

A warm day and very  
pleasant.

The Svichles went around  
town shopping to be ready  
to go back tomorrow.



Jan. 28. Started down the river with the Conservation boat and crew, Mr. Arthur and Col. Carlisle. The Fiscal is a fine large comfortable boat with sleeping quarters for 6 and a good captain, cook, crew. Ran down about 100 miles to Johnson Bayou almost to the mouth of the river and stopped at the club house on the public shooting grounds.

Had two of my traps ready to set but they were carried off on the boat which made the side trip and did not get back till after dark.

Sorry to lose one night of trapping but did some exploring. Stopped at several places along the river and found little towns and settlements along

Much of the way. Good automobile roads down both sides of river for a long way. Lots of farms and orange groves but some trees full of cactus.

No natural forests except endless lines of willows along the shores of the river and bayas. A few live oaks and other trees in dooryards seem to have been planted. Great marshes back of the dry land.

Lots of canals and channels.

Many evidences of a very mild climate and little frost. It went down to about 29 in the very cold Dec. freeze. Cat tails are tall and green and most of the marsh plants are green, including the Phragmites. Great thistles are numerous and big.

Alternanthera philoxeroides

Alligator grass is a floating, ~~creeping~~ succulent plant, which grows in a solid mass and extends by long vine like runners. It often forms rafts or rods or acres in extent over shallow water and kills out all grasses, sedges and other plants.

Jan. 29, finished my four live muskrat traps and set them all near the Club house.

Explored some of the muskrat marshes a mile or two below the Club house. Found conditions very different from farther west. Akras of Alligator grass which kills out everything and spoils the marsh for muskrats. Still there is much cattail and bull-rush and some cord grass and lots of duck potato, wiggion grass, cowtail, and other food plants.

There are a good many muskrats but the trappers are not getting many of the season is nearly over. Two weeks more and the trappers are giving up it to the wind.

No ducks seen when I was  
but Arthur found great numbers  
along the outer slopes and shot  
about a dozen; mostly  
shovellers & teal. Said they  
were all mostly in pairs.  
There is occasional duck pond  
but the ducks are out where  
the seeds are deposited  
on the mud flats.

Marsh rabbits are  
everlastingly numerous and  
feeding on cattails, alligator  
grass, other grasses, sedges,  
thistles, and willow bark.  
They are rather small and  
very dark and richly colored.

One large *Oryzomys*  
seen that had been caught  
by the cat.

Johnson Bayou. Mouth of Miss. R.  
Jan: 28-29. 1926.

Odocoileus	a few
Opussum	"
Raccoon	"
Otter	rare
Mink	a few
Weasels	none
Musk rats	abundant
Orizomys	"
Marsh rabbits	"

Jan. 31

Found one muskrat in my live trap but it was only half grown and had died of cold during the night. The other traps not disturbed.

Started up the river at about 8 AM and reached New Orleans at 7 PM., a long but pleasant, comfortable and interesting day.

Skinned and salted 7 muskrats for specimens, and watched the shores of the ships go by.

Lots of big ocean liners, freighters and large oil tanks. One oil barge with six masts and an engine was the biggest thing I ever saw afloat. Some very nice yachts and fast boats seen.

A fierce thunderstorm at  
daylight was soon over  
and the rest of the day was  
clear and pleasant.  
The water came up a foot  
or two and the river is full  
of drifting logs and debris.  
The current is swift in places  
and whirls and eddies in  
a savage and dangerous  
manner. It is rather  
muddy but not so muddy as  
during flood time. The banks  
are generally two to six feet  
above the water and the lower  
part of the bank six to ten feet  
higher. Huge logs and stumps  
are strewn along the banks as  
well as in the stream and  
even out over the big washes  
are great logs and trees  
lying half under water and mud.

Bought a fine del. vole unsheet  
for specimen, measured 530,  
222; 81 mm. and weighed  $2\frac{3}{4}$  lbs.

They all have very white and  
silvery bellies here, quite  
different from those farther west.

Feb. 1 - Worked on live traps  
all day as fast as I could  
making improvements and  
changes and one new trap.  
Warm and pleasant.

Feb. 2 - Took 10:30 AM  
train for Lake Catherine  
to test my live traps and  
teach the man in charge of  
the fur farm there to use them.  
Raining in morning.

Cold and windy in PM.  
Set 3 traps in evening but  
the water is going down rapidly  
in the marshes.

Saw pelicans and gulls  
and terns and small birds.

Feb. 3. Only one trap sprung  
and nothing in it. but the  
trappers - 170 traps  
did not get a rat, so  
I am not discouraged.

Finished up my last trap and  
set four in better places with  
the water down to near a  
permanent level and have  
strong hopes of getting rats  
tonight.

Tramped over a lot of marsh  
and found conditions different  
from any of the other places, firm soil  
and mostly "wire grass" (*Spartina patens*  
*juncea*) for food and cover. In one  
place there was a little *Scirpus americanus*  
and *robustus*, but most of the sedges  
were killed out by last year's dry  
weather and salt water. In places  
the rats eat the roots of *Spartina*  
*gleba*, but are scarce in it.



Birds = Lake Catherine. <sup>Feb. 1-6.</sup>

Brown Pelican, a few.

Cormorant "

Herring gulls com

Royal terns 2

Forsters Tern a few.

Ducks - a few in pairs flying over.

Killdeer, com

Willits a few

Yellow legs "

Red backed Sandpipers a few

Least Sandpipers "

Jacksnipe "

Great Blue heron 1 caught in traps

Coot com.

Florida Gallinule 1 seen

Copper Rail 1 caught

Plover 1 seen

Marsh hawk com

Red tail a few

There are a few bullfrogs & cottails in places but none seen where the rats are. *Phragmites* is not abundant. The "sea cane", a succulent reed like grass, is abundant along the shores of canals in places and is said to be a favorite food of muskrats.

The ground where my traps are set was burnt over about four days ago and some of the houses burned in to the next channel. The rats seem to have left this burnt area although it has not been trapped until since the burn and only few rats caught.

Turkey Buzzard	com.
Fliters	a few
Kingfisher	"
Crows	"
Boat tail grackles	abundant
Red wings	"
Meadow lark	a few.
Robins	"
English sparrows	"
Seaside finches	"
Song sparrows	com.
Swamp sparrow	"
Ammodramus ?	"
Yellow palm Warbler	a few
Yellow rump warblers	com.
Phoebe	a few.

Feb. 4, Not a rat came near any of my four traps, all on recently burnt ground, so I shall move them to grass land where rats walked last night.

Photographed rat houses & warrens.

Talked with two trappers on north side of track where they have trapped a section of land & caught 1300 rats this season.

They say the rats are getting scarce & only 9 were caught in 280 traps this morning.

Of 20 females examined none had embryos & the men say they have not seen any yet this year in skinning several hundred.

Feb. 5, Caught nothing but one rat  
ate some cat tail bait behind the  
trap - Reset traps more carefully.  
Beautiful day.

Feb. 6. Caught nothing

Went to Bay St. Louis & back of  
saw numerous houses in marshes along  
the railroad to about 6 or 8 miles west  
of Bay St. Louis. There seem to be  
none more but a man here tells  
me there are quite a lot of rats in  
marshes just west of Passagula,  
Miss. and near Gautier, the next station  
west.

Found Bay St. Louis larger &  
much more attractive than when I was  
there in 1893, about 3000 people  
with nice houses along the water  
front, beautiful live oaks, magnolias,  
cedars and sycamores, fine sandy  
beaches, good roads & streets,  
beautiful pine and oak woods back of town.

Feb. 7. Sunday, Went to  
New Orleans for mail and a bath  
and clean clothes.

Feb. 8 - Got materials for a couple  
of new kind of traps, and  
examined about 15 heads and  
100 pieces of Louisiana deer  
at Lord Stumphearts, the taxidermist  
at 2224, Jackson St.

It seems that there are 3  
good forms of deer in Louisiana,  
O. assecula, least of the Miss. R.  
O. louisiana from the swamps  
west of the Miss. R., a little  
red deer with narrow horns  
in the coast marshes west of  
the river. Then texensis  
seems to come into the western  
part of the state and it is  
probable that true virginiana  
comes into the N.E. part.

Feb. 9. Back to Lake Catherine  
when I find my traps caught  
one nice muskrat yesterday of  
two more traps were sprung, so  
I am greatly encouraged.  
Reset the traps.

Warm & pleasant.

Feb. 10. Worked all day making two  
new kind of traps with cog tops  
and tin bottoms. Set them in  
marsh & reset the others.

Warm & pleasant.

Feb. 11. One of my new traps  
had a muskrat in it, alive &  
well & not injured.

Photographed it & sent the  
~~Feb. 12~~ two rats to Sohier.  
Caught nothing in other  
traps.

Colder, a little frost in  
evening.

Feb. 12. Found another nice  
big female muskrat in the same  
trap and feel so sure those  
will catch them readily that  
I went in to New Orleans  
and caught a 5 PM train  
for home. Will perfect this  
trap and send back good  
samples to my other boys.  
Had a long talk with Mr.  
Stanley Arthur and Mr. Iron.  
at Cedarvale Camp.  
A warm day.

Feb. 13, Atlanta Georgia to  
Dumville Virginia.  
Raining & mild. No snow.

Feb. 14, Arrived Washington  
3 AM but did not leave to  
get up until 7:20 AM.  
Found snow on the ground  
and cool weather but mild  
and raining.





The Muskrat : John Cotherin, Esq.

Musquash should be adopted for the name of this interesting fur-bearing for it is no rat and in no way rat-like. A native of North America only it has no near relative in other countries, its nearest being the "meadow mice" or "voles".

In size it is larger than a rat, adults weighing 2 to 3 lbs. In form heavy and compact with short <sup>stems</sup> neck and legs and a long, ~~snout~~ <sup>snout</sup> like, laterally compressed tail, thin haired and minutely scaled. The hind feet are <sup>directly</sup> ~~directly~~ <sup>parallel</sup> shaped, not webbed but with ridges of feet and toes <sup>strongly</sup> margined with close rows of stiff bristles ~~and~~ that spread in the water and probably add more swimming surface than would be gained by webbs.

The eels are <sup>usually</sup> naked, serrulate and scutellate with 4 to 6 isolated and rather somewhat irregular black tubercles. The <sup>of the five long toes</sup> nails are long, ~~not~~ channelled beneath and straightish for climbing muddy banks and digging, ~~not~~ swimming and walking on floating grasses.

The front feet are small and hand like, adapted to holding and handling food, walking and digging, with four long fingers and a <sup>very</sup> short thumb ~~not~~. The nails are well channelled and slightly curved and with the fingers can grasp firmly against the firm, five <sup>naked</sup> tuberculate palm. The <sup>opposing</sup> fingers are white and the fingers below cross serrulate with black. All of the feet, like the tail, are thinly <sup>above</sup> covered with short stiff hairs. The <sup>small</sup> nose pad, including both nostrils, is naked and smooth but the rest of the body, including the ears, is

densely covered with fine soft fur, well protected by long, glistening guard hairs, longest and most glistening on the back.

There are <sup>tufts of</sup> long, spreading mustaches from the sides of the upper lips. Three long eyebrows and three long stiff chin whiskers but no trace of eyelashes to guard the little bead-like eyes. The lips are fur lined and the mouth closes vertically as well as laterally back of the prominent and externally conspicuous orange colored incisors. The tongue is thick and fleshy, well filling the mouth between the molar series. The anus and urogenital organs ~~are~~ are located in the furry part of the post abdominal region and the two ~~are~~ are strikingly similar in superficial appearance.

Except in time of breeding activity the vagina of the female is closed and sealed while the anterior urinary penis<sup>tube</sup> of the female closely resembles the same organ of the male. Only by pressure can the vagina be opened to positively determine the sex and even this is sometimes difficult. The penis of adult males contains a short bone, scarcely a quarter of an inch long, terminating in a trilobate cartilage, folded within the tip of the penis but with pressure well adapted to breaking open the closed hymen of the female.

In color dark brown with black guard hairs over the upper parts; sides yellow brown; lower parts silvery buff, lightest on throat and with a blackish spin stripe; feet and tails <sup>mainly</sup> ~~generally~~ plumbeous or sooty gray. eyes black; incisors orange; nails pink.

Some local variation across the state of Louisiana will have to be worked out with all of the specimens together.

The ~~male~~ <sup>male</sup> mask glands are a pair of ~~sack-shaped~~ <sup>sack-shaped</sup>, whitish, fleshy glands lying just under the skin of the belly in front of and attached to the sides of the penis by the narrow posterior tips, at which apparently open into the penial orifice.



They do not contain a waxy deposit as in the beaver but hold in small cavities a powerfully musky fluid, at times ~~very~~ abundant and strong and at other times or ages or conditions scarcely noticeable. In the females the glands are smaller and less musky.

The mammae of this southern muskrat are normally 2 pairs of preal and two of inguinal or four elongated mammary glands. In a few instances, about one in 20 or 30 females, there is a supernumerary post preal pair of mammae.

The young of adult females are regularly 4 in number, less in immature females and rarely 5 or 6 in abnormal cases.

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BUREAU OF BIOLOGICAL SURVEY.

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8-1035

Fiber, Bowen Camp, Cameron Co.,  
Jan 8, 24.

♀ 57, 286, 84, 18, 3.

♀ 15, 110, 80, 19, 5.

♀ 36, 222, 81, 15, 3.

No embryos at all full grown  
or at foot. Stomachs full of 3<sup>rd</sup> stage.

15  
30  
450